ABSTRACT

Novel gas-permeable membranes which are particularly useful in the packaging of fresh cut fruit and vegetables, and other respiring biological materials. The membranes have an O_2 permeability of at least 775,000 ml/m^2.atm.24 hrs, a P_{10} ratio of at least 1.3, and a ratio of CO_2 permeability to O_2 permeability (R) of at least 1.5, and are made by forming thin polymeric coatings on microporous polymeric films. Preferred coating polymers are side chain crystalline polymers. Preferred microporous films contain inorganic fillers, particularly such films based on ultrahigh molecular weight polyethylene or polypropylene. Figure 1 illustrates how O_2 permeability and R ratio vary for different coating polymers and microporous films.